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Peritoneal Tuberculosis Mimicking Peritoneal Carcinomatosis in an Immunocompetent Patient

Sbihi Siham[1]*, Yamina Yassine[1], Yasmine Bachadini[1], Hala Aouroud[1], Lairani FZ[1], Nacir Oussama[1], Ait Errami[1], Oubaha Sofia[1], Samlani Zouhour[1], Krati Khadija[1]

[1]Department of Gastroenterology, Mohammed VI Marrakech University Hospital Center, Marrakech, Morocco, Physiology Laboratory, Faculty of Medicine and Pharmacy of Marrakech, Marrakech, Morocco

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***Corresponding author:** Sbihi Siham
Department of Gastroenterology, Mohammed VI Marrakech University Hospital Center, Marrakech, Morocco 2 Physiology Laboratory, Faculty of Medicine and Pharmacy of Marrakech, Marrakech, Morocco

Abstract **Case Report**

Despite the measures taken to prevent tuberculosis, it remains a widespread condition in Morocco. Although rare, peritoneal tuberculosis can mimic peritoneal carcinomatosis; We report the case of a 38-year-old patient, admitted for an etiological assessment of protein-rich ascites whose surgical exploration allowed us to suggest the diagnosis of peritoneal carcinomatosis from the macroscopic examination; but the histological analysis. The evolution was favorable after antibacillary treatment.

Keywords: Peritoneal tuberculosis, Peritoneal carcinomatosis, Ascites, Mycobacterium tuberculosis, Differential diagnosis, Granuloma.

INTRODUCTION

Mycobacterium tuberculosisis the main causative agent of tuberculosis (TB) [1]. Peritoneal tuberculosis represents 1 to 2% of all forms of TB, its pathophysiology is often due to hematogenous dissemination from a primary pulmonary focus [2] it can thus develop anywhere in the abdominopelvic cavity, but it mainly affects the omentum, the intestinal tract, the liver, the spleen or the female genital organs in addition to the parietal and visceral peritoneum [3]. The main risk factors for peritoneal tuberculosis are HIV-infected patients, diabetes mellitus and the presence of underlying malignancy [4-5].

We report a case of peritoneal tuberculosis mimicking peritoneal carcinomatosis in an immunocompetent patient.

PATIENT AND OBSERVATION

A 38-year-old SL patient, with no notable pathological history, apart from her operation for a right ovarian cystaadenoma 2 years ago; admitted to our training for abdominal distention without stopping materials and gases, evolving for 3 months in a context of anorexia and unquantified weight loss. Clinical examination on admission revealed a slightly distended abdomen with dullness of the flanks. Abdominopelvic ultrasound showed a normal appearance of the ovaries with moderate peritoneal effusion. The uterus was of normal size, of homogeneous echostructure with a thin endometrium. Complementary pelvic MRI did not show any abnormalities apart from Napoth cysts in the uterus; an effusion of moderate abundance with bilateral inguinal lymphadenopathy; the ovaries were not seen (Figure 1). CA125 was slightly increased at 45.3 IU/ml while the other tumor markers (carcinoembryonic antigen, alfa fetoprotein and HCG) were normal. The rest of the biological assessment was normal. Faced with this picture, an exploratory median laparotomy was performed revealing the presence of an aspect of generalized peritoneal carcinomatosis; at the level of the peritoneum and mesentery; as well as at the level of the intestinal loops; peritoneal biopsies and epiploics were made. The pelvis was shielded and adherent, hindering exploration of the uterus and adnexa. The extemporaneous anatomo-pathological examination revealed the presence of an epitheloid and gigantocellular granuloma with caseous necrosis, suggesting peritoneal tuberculosis.

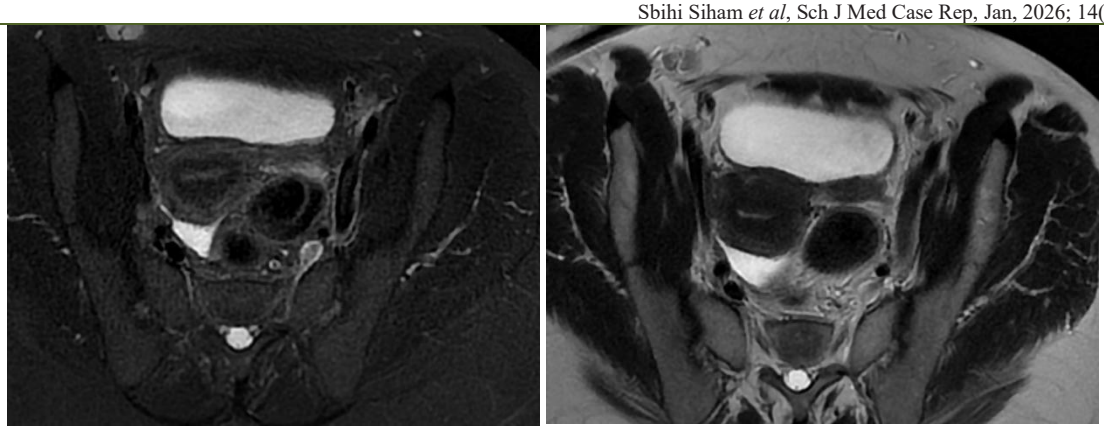

FIGURE 1: Cross sections of the pelvic MRI showing an appearance of Napoth cysts in the uterus; an effusion of moderate abundance with bilateral inguinal lymphadenopathy

The patient underwent a full course of antituberculous therapy (2RHZE/4RH), with a favorable clinical response characterized by resolution of the ascites, a follow-up ultrasound performed six months after the end of treatment showed no abnormalities.

DISCUSSION

The pseudo-tumor peritoneal localization of tuberculosis is a rare clinical form, with an estimated frequency of 1 to 3% depending on the series [6,7] even in endemic countries. It can affect all age groups with a predilection among women between 20 and 50 years old [6]. Peritoneal transplantation of Mycobacterium Tuberculosis is done hematogenously; mainly from a primary pulmonary infection that often goes unnoticed, as in the case of our patient, more rarely after a primary gastrointestinal infection; factors that can favor this type of attack; such as lack of hygiene and precarious socio-economic conditions [8].

During the assessments initially carried out on our patient, we did not obtain any etiological orientation apart from the increase in CA 125. CA125 is the marker for ovarian cancers of epithelial origin [9]. However, its rate can be high in several benign gynecological pathologies (endometriosis, uterine fibroids, pelvic inflammatory processes), extra-gynecological (peritonitis, pancreatitis, hepatitis, nephrotic syndrome, peritoneal tuberculosis) as well as in non-gynecological cancers with peritoneal metastases. In case of peritoneal tuberculosis, very high values (>1000U/ml) can be seen [10]. In the study by Koc et al, 90.1% of patients with peritoneal tuberculosis had an elevated plasma CA-125 level, and the average value was 565 U/ml [11]. Therefore, CA125 has no place in the differential diagnosis between ovarian cancer and peritoneal tuberculosis. In contrast, Simsek *et al.,* report that the reduction in CA125 level is correlated with the response to anti-tuberculosis treatment and indicate it as a monitoring marker under anti-bacillary treatment [12]. Other biological disturbances are not specific, notably: anemia, inflammatory syndrome, as well as intradermal reaction to tuberculin. The definitive diagnosis by analysis of ascites fluid is only made after the detection of Mycobacterium Tuberculosis either on direct examination or after culture on Lowenstein-Jensen medium [12]. report that the reduction in CA125 level is correlated with the response to anti-tuberculosis treatment and indicate it as a monitoring marker under anti-bacillary treatment [12]. Other biological disturbances are not specific, notably: anemia, inflammatory syndrome, as well as intradermal reaction to tuberculin. The definitive diagnosis by analysis of ascites fluid is only made after the detection of Mycobacterium Tuberculosis either on direct examination or after culture on Lowenstein-Jensen medium [12]. report that the reduction in CA125 level is correlated with the response to anti-tuberculosis treatment and indicate it as a monitoring marker under anti-bacillary treatment [12]. Other biological disturbances are not specific, notably: anemia, inflammatory syndrome, as well as intradermal reaction to tuberculin. The definitive diagnosis by analysis of ascites fluid is only made after the detection of Mycobacterium Tuberculosis either on direct examination or after culture on Lowenstein-Jensen medium [12].

In our case, the extemporaneous anatomo-pathological examination after biopsy of the whitish granulations was sufficient to confirm the diagnosis. The search for mycobacteria by polymerase chain reaction (PCR) can be useful for diagnosis with a sensitivity of 75 to 80% and a specificity of 85 to 95%, but this technique is often unavailable [13]. As in the case of our patient, surgical exploration is necessary when faced with the suspicion of a malignant tumor of the ovary. The approach can be either a laparotomy or a laparoscopy. Ultrasound-guided transvaginal or transabdominal biopsies can be offered in cases of strong suspicion of tuberculosis, thus limiting postoperative complications [14]. The histological study of the biopsies allows the diagnosis to be corrected by showing gigantocellular granulomas with caseous necrosis specific to Koch's bacillus. Treatment of pelvic tuberculosis is essentially medical. It is based on the daily administration of a quadruple therapy combining: Isoniazid, Rifampicin,

Ethambutol and Pyrazinamide for two months, then maintenance treatment for four months with a daily dual therapy combining Isoniazid and Rifampicin [15].

CONCLUSION

Peritoneal tuberculosis should be considered in any ovarian mass associated with peritoneal effusion. Cytology and culture of ascites puncture fluid can resolve the problem. Otherwise, a laparoscopy or even a laparotomy due to adhesions with biopsy is indicated, allowing the diagnosis to be corrected and avoiding unjustified excision surgery, most often in a woman with genital activity.

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